

(c) a plunger axially movable in said barrel between positions axially spaced from said adapter and engaging said adapter, said plunger having first and second opposite ends; and

(d) adapter engagement structure disposed at said first end of the plunger and engageable with a mating connection engagement structure on the adapter, said structures having respective drive and connective engagement surfaces, said drive surfaces being engageable with one another when said plunger lies in said adapter engaged position, said drive surfaces being jointly movable to enable rotation of the adapter relative to the barrel in response to relative rotation of the plunger and barrel to cause the adapter to part from the distal end of the barrel, said connective surfaces (i) lying in axial opposition to and engaged with one another when said drive surfaces are engaged with one another to connect the plunger and adapter one with the other and (ii) enabling said adapter, when parted from the end of the barrel in response to joint rotation of said adapter and said plunger relative to said barrel, to be withdrawn with the needle into the interior of the barrel in response to joint axial movement of said plunger and said adapter in a direction away from the distal end of the barrel.

2 14. A syringe according to Claim 13 wherein said second end of said plunger has structure for connecting said plunger second end with structure at the distal end of the barrel, rupturable structure intermediate said first and second ends of said plunger for detachably connecting said first and second ends of said plunger, whereby said first and second ends of said plunger can be detached from one another when said adapter

and needle are withdrawn into the interior of the barrel, leaving said first end in said barrel, said second end being attachable to said structure at the distal end of the barrel.

3 15. A syringe according to Claim 13 wherein said adapter engagement and connection engagement structures on said plunger and adapter, respectively, include alignment surfaces inclined to an axis of the barrel and engageable with one another in response to axial movement of said plunger toward said adapter causing relative rotation between said plunger and said adapter.

B 4 16. A syringe according to Claim 15 wherein said second end of said plunger has structure for connecting said plunger second end with structure at the distal end of the barrel, rupturable structure intermediate said first and second ends of said plunger for detachably connecting said first and second ends of said plunger, whereby said first and second ends of said plunger can be detached from one another when said adapter and needle are withdrawn into the interior of the barrel, leaving said first end in said barrel, said second end being attachable to said structure at the distal end of the barrel.

5 17. A syringe comprising:
a hollow, axially elongated barrel having distal and proximal ends;
needle-mounting structure affixed to said distal end of said barrel;
a hollow needle releasably carried by said needle-mounting structure and having an end in communication with the interior of said barrel;